

2013 Lower East Coast Water Supply Plan Update



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Water Supply Development

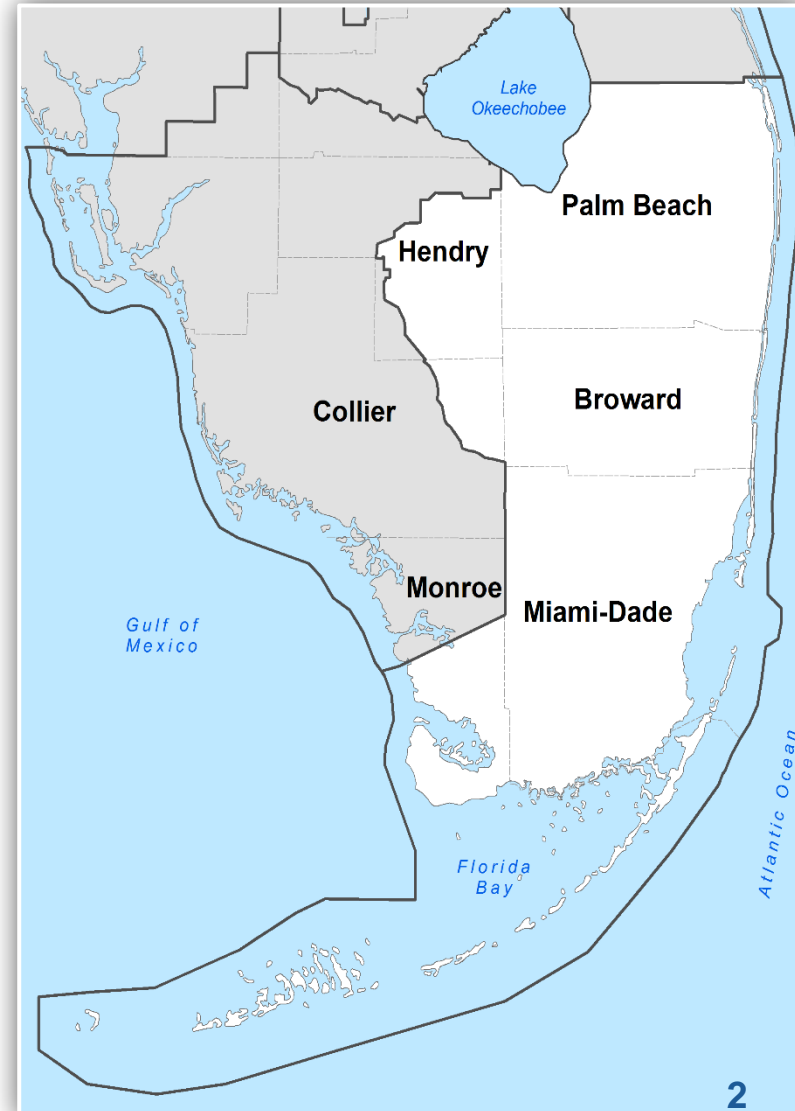
September 12, 2013
Governing Board Meeting



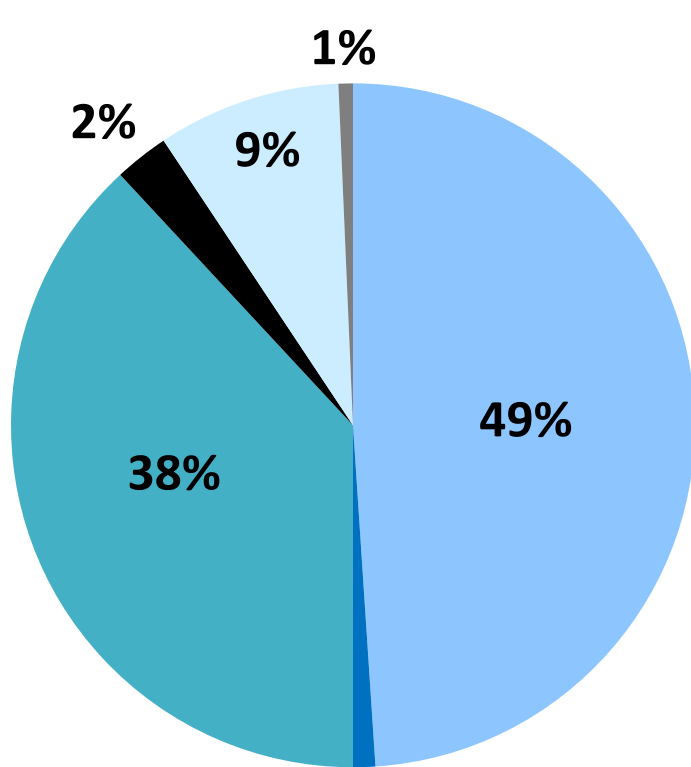
LEC Planning Area

Planning Horizon 2010 – 2030

- ▶ **Population:**
 - 2010 5,637,725
 - 2030 6,666,866
 - 18% increase
- ▶ **Irrigated agricultural acreage:**
 - 2010 575,316
 - 2030 575,897
 - Slight increase (< 1%)
- ▶ **Gross water demands:**
 - 2010 1,719 MGD
 - 2030 1,933 MGD
 - 12% increase

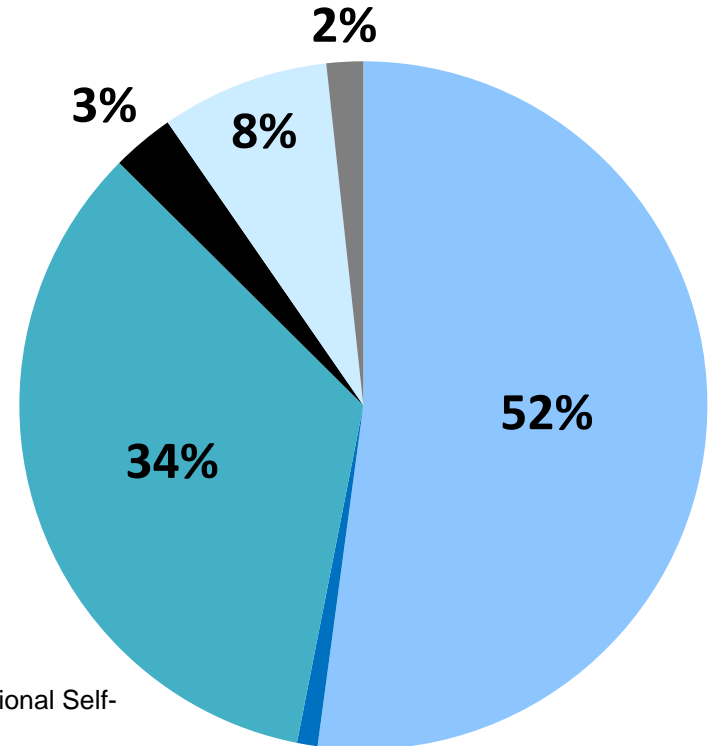


2010 & 2030 Percentage of Use by Water Use Category



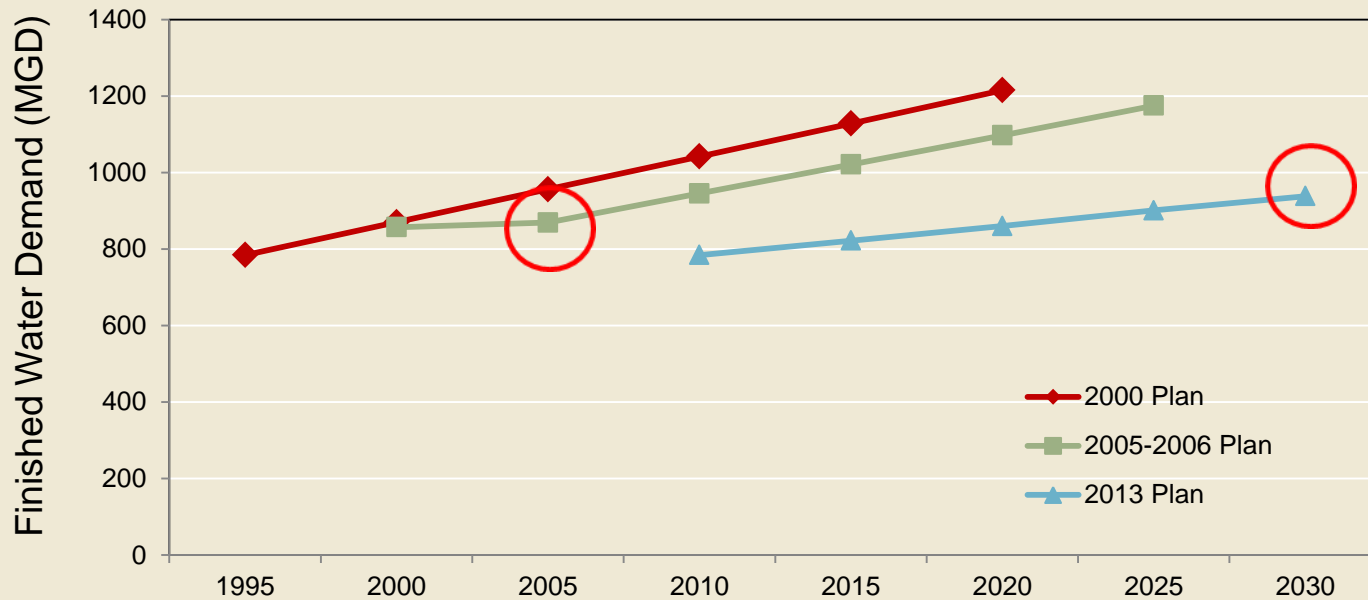
2010 DEMAND
(1,719 MGD)

- Public Water Supply
- Domestic Self-Supply
- Agricultural Self-Supply
- Industrial/Commercial/Institutional Self-Supply
- Recreational/Landscape Self-Supply
- Power Generation Self-Supply



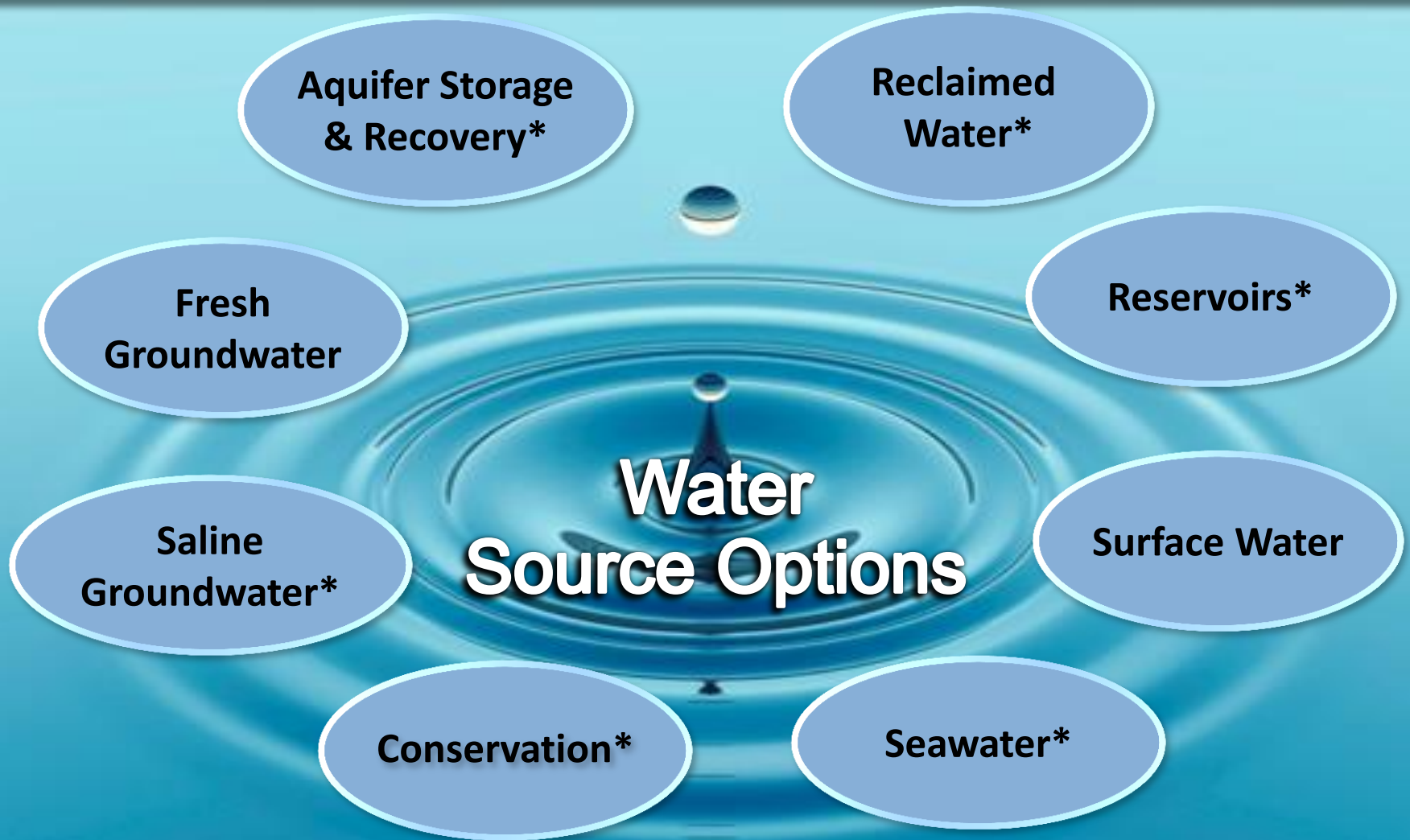
2030 DEMAND
(1,933 MGD)

History of Public Water Supply Demand Projections (Finished Water)



Plan Year	1995	2000	2005	2010	2015	2020	2025	2030
2000 Plan	784	870	956	1,042	1,128	1,215		
2005 Plan		857	869	945	1,021	1,097	1,175	
2013 Plan				784	822	860	901	938

Water Source Options



* Alternative water source

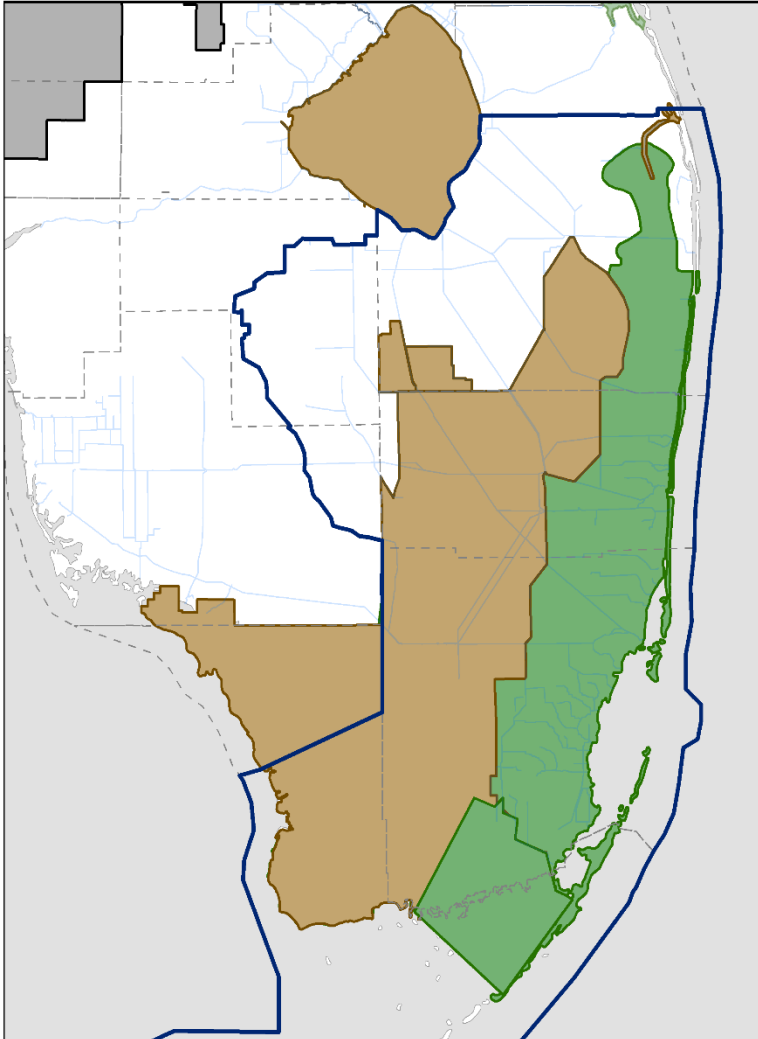
Environmental Water Needs



- ▶ Implementation of CERP and other projects
- ▶ Regulatory protection of water resources
 - Water Use Permitting Program
 - Minimum Flows and Levels*
 - Water Reservations
 - Restricted Allocation Area Rules
 - Water Shortage Criteria

** Recovery & prevention strategies rely on CERP implementation*

LEC Minimum Flows and Levels (MFLs) Water Bodies



MFL Prevention Water Bodies

- Biscayne aquifer
- Northeastern Florida Bay

MFL Recovery Water Bodies*

- Northwest Fork of Loxahatchee River
- Lake Okeechobee
- Everglades (WCAs and ENP)

**Recovery and prevention strategies
rely on CERP implementation*

Table B-3. Capital projects that provide water supplies for MFL recovery and prevention strategies.^a

MFL Water Body	Capital Projects	Program	Status
Everglades (including WCAs and Everglades National Park) – projects needed for MFL recovery	Modified Water Deliveries to Everglades National Park	Department of Interior/USACE	Substantially complete
	C-111 Spreader Canal Western	CERP/SFWMD	Operational testing
	C-111 South Dade	SFWMD/USACE	Substantially complete
	Broward County Water Preserve Area – WCA 3A/3B Seepage Management	CERP	Planning and design complete. Waiting for congressional authorization
	Environmental Preserve at Marjory Stoneman Douglas Everglades Habitat ^d	CERP/SFWMD	Operational
	Fran Reich Preserve Reservoir	CERP	Under construction by USACE
	Broward County Water Preserve Area – C-11 Impoundment	CERP	Planning and design complete. Waiting for congressional authorization
	Broward County Water Preserve Area – C-9 Impoundment	CERP	Planning and design complete. Waiting for congressional authorization
	WCA 3 Decomartmentalization and Sheetflow Enhancement	CERP	Draft PIR complete ^b
	EAA Storage Reservoir on EAA A2 Site	CERP	Draft PIR complete ^b
Lake Okeechobee – projects needed for MFL recovery	WCA 3B/Everglades National Park Seepage Management	CERP	Draft PIR complete ^b
	Lake Okeechobee Watershed	CERP	To be determined
	Lake Okeechobee Watershed – Lakeside Ranch STA ^d	SFWMD	Phase I operational
Loxahatchee River - projects needed for MFL recovery	USACE Herbert Hoover Dike Major Rehabilitation	USACE	2022 ^c
	Loxahatchee River Watershed Restoration	CERP	Planning initiated
	Loxahatchee River Watershed Restoration – G-160 and G-161 Structures ^d	CERP/SFWMD	Operational
	Interim Use of L-8 Site	SFWMD	Operational
Florida Bay – projects needed for MFL prevention	Everglades National Park Seepage Management	CERP	Draft PIR complete ^b
	WCA 3 Decompartmentalization and Sheetflow Enhancement	CERP	Draft PIR complete ^b
	C-111 Spreader Canal Western ^d	CERP/SFWMD	Operational testing

a. MFL rules identify the general programs that will be used to develop and implement prevention or recovery, rather than specific projects. The potential role of specific projects to address MFL water needs is generally considered in the respective MFL technical supporting documentation.

b. Component of Central Everglades Planning Project.

c. Time shown is for rehabilitation of Reaches 1, 2, and 3, which may be sufficient to allow additional storage in Lake Okeechobee necessary to prevent MFL violations.

d. CERP project initiated by SFWMD.

Updated MFL Recovery and Prevention Strategies - Projects

Future Direction (Excerpts)

- ▶ Continue aquifer monitoring program
- ▶ Construct CERP and related projects
- ▶ Promote local storage projects
- ▶ Continue to evaluate the feasibility of the C-51 Reservoir Project
- ▶ Promote water reuse and conservation measures
- ▶ Implement projects to comply with 2008 Ocean Outfall Act
- ▶ Identify the potential impact of sea level rise on utilities and other users
- ▶ Complete East Coast Floridan Model
- ▶ Coordinate with local governments and utilities on water supply related elements



Written Comments Received on June 5 Draft From..

- ▶ Sunrise Utilities
- ▶ Miami-Dade WASD
- ▶ FPL
- ▶ Pompano Beach
- ▶ Dept of the Interior
- ▶ Sierra Club
- ▶ Palm Beach Cty Utilities
- ▶ Miramar Utilities
- ▶ Village of Pinecrest
- ▶ Hallandale Beach
- ▶ USACE Recover
- ▶ Ft. Lauderdale Utilities
- ▶ Hallandale Beach
- ▶ Broward County Utilities
- ▶ FDACS
- ▶ Seminole Tribe
- ▶ Broward Cty Env Protection & Growth Mgmt Dept
- ▶ FDEP
- ▶ FKAA
- ▶ Environmental Organizations (16)

Summary of Comments Received on June 5 Draft

Natural Systems

- ▶ Concern of meeting MFLs and implementation of recovery strategies
- ▶ Review 2008 LORS and Adaptive Protocols
- ▶ CERP construction not expeditious
- ▶ Protection of water for Biscayne Bay
- ▶ Include environmental restoration water use category



Conservation

- ▶ Enforcement of conservation ordinances
- ▶ Need goal-based approach in future
- ▶ Funding



Summary of Comments Received on June 5 Draft (cont.)

Water Sources

- ▶ Effect of 2008 LORS on agricultural water availability
- ▶ Approach for reuse substitution credits and offsets
- ▶ Floridan aquifer modeling needed
- ▶ Funding

Other

- ▶ More robust planning for climate change
- ▶ Central Everglades Planning Project
- ▶ Include C-51 Reservoir Project



Conclusions

- ▶ Meeting the 1:10 level of service for all water users and achieving all MFLs is not likely within the next 5 years
- ▶ CERP implementation and other projects will be necessary to meet environmental needs
- ▶ Public Water Supply utilities can meet 2030 demands by implementing only 2 additional water supply projects
- ▶ Additional water from Lake Okeechobee from operational flexibility within the existing LORS08 schedule, or a revised regulation schedule subsequent to HDD repairs could return the Lake to an MFL prevention status, enhance existing permitted users level of service and support environmental needs



Bottom Line



The future water demands of the region can be met through the 2030 planning horizon with appropriate management, conservation and implementation of projects in this Plan

Requirement: Link Land Use and Water Supply Planning (Ch 163, F.S.)



After the District updates the Water Supply Plan:

- ▶ All local governments must amend their comprehensive plan to incorporate a water supply facilities work plan within 18 months of Water Supply Plan Update
- ▶ Utilities identify the projects to be developed
- ▶ Utility Annual Progress Reports

Staff Recommendation

**THE GOVERNING BOARD
ISSUE A FINAL ORDER
APPROVING THE 2013
LOWER EAST COAST
WATER SUPPLY PLAN
UPDATE.**

